

-continued

Gln Phe Ala Glu Thr Glu Arg Asp Thr Ile Phe Thr Ile Glu Tyr Ser
500 505 510

Ala Arg Thr Gly Ile Glu Ser Val Tyr Thr Leu Leu Asn Val Asp Arg
515 520 525

Gly Val Pro Glu Val Trp Gly Ser Thr Phe Asp Ile Arg Asp Leu Val
530 535 540

Asn Ala Thr Tyr Cys Met Arg Asp Gly Lys Lys Ile Thr Asp Met Lys
545 550 555 560

Leu Gly Phe Lys Glu Asn Ile Ala Leu Lys Glu Leu Leu Lys Lys Ile
565 570 575

Ser Gly Thr Asp Val Glu Lys Leu Leu Lys Glu Tyr Lys Leu Ile
580 585 590

<210> SEQ ID NO 2
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<212> TYPE: PRT
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
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<400> SEQUENCE: 2

Ser Val Leu Asp Glu Phe Tyr Trp Leu Asp Lys Lys Asp Pro Tyr Ser
1 5 10 15

Leu

<210> SEQ ID NO 3
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<212> TYPE: PRT
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Pro Asp Phe Lys Ala Val Arg Phe Thr Arg Arg Asn Gln Tyr Glu Ser
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Met Ile

<210> SEQ ID NO 4
<211> LENGTH: 18
<212> TYPE: PRT
<213> ORGANISM: Artificial Sequence
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Gln Ala Thr Ser Ile Lys Ile Leu Arg Asp Gly Lys Glu Glu Ile
1 5 10 15

Lys Leu

1. An antibody or an antigen-binding fragment thereof, wherein the antibody or the antigen-binding fragment is configured to bind to an antigen of the bacterium *Candidatus savagella* and (i) inhibits the adhesion of the bacterium to intestinal epithelial cells, preferably human intestinal epithelial cells, and/or (ii) depletes the bacterium.

2. The antibody or an antigen-binding fragment thereof as claimed in claim 1, wherein the antibody or the antigen-binding fragment is selected from the group consisting of: immunoglobulin molecule, polyclonal antibody, monoclo-

nal antibody, chimeric antibody, antibody generated by CDR-grafting, humanized antibody, Fab, Fab', F(ab')₂, Fv, disulfide-linked Fv, scFv, single-domain antibody, diabody, multispecific antibody, dual-specific antibody and bispecific antibody.

3. The antibody or an antigen-binding fragment thereof as claimed in claim 1, wherein the antibody is a chicken immunoglobulin molecule or antibody.

4. The antibody or an antigen-binding fragment thereof as claimed in claim 3, wherein the chicken immunoglobulin molecule or antibody is IgY.